

REMARKS

Claims 1-19 and 21-24 are pending. Claims 1, 19, 23, and 24 have been amended. No new matter has been added. Applicants thank the Examiner for indicating that claims 10 and 11 contain allowable subject matter. In view of this response, applicants submit that the objection to claims 10 and 11 for depending on a rejected base claim should be withdrawn.

Applicants have amended the specification and Figure 3 to resolve inconsistencies among reference numerals. In particular, applicants have amended Figure 3 by changing reference numeral 240 to 241. Thus, reference numeral 240 refers to the turbine generally, for example, in Figures 1 and 5, while reference numeral 241 refers to the impeller of the turbine. In addition, applicants have amended the specification so that reference numeral 244 refers to the arrow showing airflow. The secondary impeller thus does not have a reference numeral as it is implicit in the structure of the depressions 242 and ribs 243 of impeller 241, as described in the specification. Applicants submit that the objections to the drawings and the specification have been overcome.

Claims 23 and 24 were rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. While applicants do not agree with this rejection, applicants nonetheless have amended claims 23 and 24 to eliminate "only" so as to broaden the scope of the claims. Applicants submit that this rejection is obviated.

Claims 1, 19, 23, and 24 were rejected under 35 USC 102(b) as anticipated by Melzner (US 6,151,752). This rejection is respectfully traversed.

Claims 1 and 19 recite a cleaner head having a turbine air inlet, separate from a suction inlet, which admits air separately from air admitted by the suction inlet. In contrast, Melzner discloses a cleaner head having a turbine air inlet 12 that admits the same air that is drawn in through suction inlet 73. In addition, claims 1 and 19 recite a control for preventing rotation or reducing the speed of rotation of the agitator. The control is configured to be responsive to the speed of rotation of the first turbine or to flow of air to or through the first turbine. In contrast,

Melzner discloses means for controlling airflow to the turbine depending upon the loading of the roller brush, rather than based on the speed of rotation of the first turbine or flow of air to or through the first turbine. Thus, in Melzner, although a surge of air may enter the turbine upon lifting the vacuum head from a surface, the alleged controlling means is not responsive to that surge of air (or a corresponding increase in speed of rotation of the turbine) but rather is responsive to the reduced power uptake of the roller brush. See Melzner, column 2, lines 5-15. Accordingly, Melzner does not suggest the invention of claims 1 and 19, or dependent claims 23 and 24, at least for these reasons.

Claims 1-9 and 12-24 were variously rejected under 35 USC 103(a) over Atsushi [sic: Morishita] (JP 10286202), and in view of other secondary references. Since claim 20 was previously cancelled, applicants assume this rejection was intended to apply to claims 1-9, 12-19, and 21-24. These rejections are traversed.

Morishita does not suggest a control for preventing rotation or reducing the speed of rotation of the agitator, in which the control is configured to be responsive to the speed of rotation of the first turbine or to flow of air to or through the first turbine, as recited in claims 1 and 19. The Office Action asserts that, as a result of a blockage in the suction inlet 26 or the suction duct 40, the airflow through the turbine 50 would inherently increase. This may be true. However, the Office Action goes on to assert that, as a result of the increase in airflow through the turbine 50, the closure member 160 would rise to cut off the airflow through the turbine 50 to stop or reduce the speed of the turbine 50. Applicants respectfully submit that this assertion does not accord with the structure and operation of Morishita.

First, if the blockage occurs in the suction inlet 26, a suction force would continue to act on the closure member 160 via the opening 152. Indeed, the suction force would be greater in the event of a blockage at the suction inlet 26. Consequently, the closure member 160 would not rise, notwithstanding any increase in airflow through the turbine 50. Second, if the blockage occurs in the suction duct 40, it may be that the closure member 160 will begin to rise.

However, as soon as the closure member 160 begins to rise, the opening 152 beneath the closure member 160 would be uncovered. As a result, air would be drawn into the turbine 50 not only from the turbine inlet 41 but also from the suction inlet 26 via the opening 152. The closure member 160 would therefore fail to rise any further. Moreover, irrespective of any rise in the closure member 160, the total rate of airflow through the turbine 50 would be unchanged. Consequently, in spite of a blockage in the suction duct 40 and the resulting increase in airflow through the turbine 50, the closure member 160 would not rise sufficiently to have any influence on the speed of the turbine 50 or, consequently, the alleged agitator 60. Therefore, Morishita does not disclose a control configured to be responsive to the speed of rotation of the first turbine or to flow of air to or through the first turbine, in combination with the other elements of claims 1 or 19. Accordingly, claims 1 and 19, and their dependent claims, would not have been rendered obvious by Morishita.

Claims 9 and 12 were rejected as obvious over Morishita in view of Moren (US 5,592,716), claims 15-17 were rejected as obvious over Morishita in view of Kirby (US 2,648,396), and claim 18 was rejected as obvious over Morishita in view of Conrad (US 6,099,661). These secondary references do not remedy the deficiencies of Morishita. Further, applicants submit that it would not have been obvious to a person of ordinary skill in the art to modify Morishita according to the teachings of these secondary references because none are directed to a cleaner head having an agitator driven by an air turbine. Specifically, Moren discloses a vacuum generator comprising a turbo fan unit driven by an electric motor at speeds in excess of 50,000 rpm and Kirby and Conrad disclose an agitator driven by an electric motor. Consequently, the ordinary artisan would not have been motivated to use these secondary references to modify the air turbine of Morishita so as to arrive at the claimed invention.

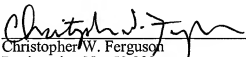
In view of the foregoing, applicants submit that all of the pending claims are allowable and that this application is in condition for allowance. Applicants request that the Examiner withdraw the outstanding objections and rejections and issue a Notice of Allowance.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **424662010500**.

Respectfully submitted,

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